

Department of Health
Health Services Quality Assurance

“Mini” Business Area Analysis
Final Report

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Introduction

In December of 2003, the Department of Health (DOH), Health Services Quality Assurance (HSQA) organization contracted with IRM Services Group to perform a “Mini” Business Area Analysis for the Health Profession Quality Assurance (HPQA), Emergency Medical Services (EMS) and Office of Community and Rural Health (OCRH) organizations. The functional and data requirements produced in this analysis will be combined with those derived from the 2000 and 2002 projects in FSL. The resulting consolidated functional and data requirements will ultimately serve as the foundation for an RFQQ/RFP for the procurement of a Commercial Off The Shelf (COTS) Regulatory Licensing System.

Project Purpose

The primary purpose of the Mini Business Area Analysis (BAA) is to define the business and data requirements for a new computer software application to facilitate HSQA business processes. The business requirements will ultimately be used to evaluate and select a vendor, whose software application best meets the needs of entire HSQA organization.

Project Scope

For steps 5 and 6 of this portion of the Mini BAA project, the scope centered on the establishment of a consolidated list of functional requirements and a consolidated view of the data requirements.

Project Deliverable

In addition to the interim project deliverables completed in March 2004 (see Interim Report dated 3/24/2004), the work order (contract number N10115, work order W17, task 5 & 6) defined two additional deliverables:

- Complete a consolidated list of HSQA Business Requirements.
- Complete a consolidated data model (Entity Relationship Diagram) for HSQA (Attachment A)

In order to complete the defined deliverables and/or to adequately describe the defined deliverables, the following additional documents are included:

- Entity Definitions for the consolidated data model of HSQA (Attachment B)
- Data Model Business Rules for Major Entities describing the key entity relationships for the consolidated data model (Attachment C)

Project Approach

This phase of the project officially began April 7, 2004 and continued through June 17, 2004 when the defined deliverables for this phase were completed.

The initial step in the consolidation of the business and the data requirements involved the establishment of a common set of business terms, which could be used to define the business requirements and data entities. This was necessitated by the fact that all of the departments used different terms to describe the same basic entity (for example, license, certificate and permit are all “authorizations” for a public health party or facility to operate). Having defined the common terms the next steps involved repeated pass of the consolidation process, which resulted in a set of common business requirements and common entity relationship diagram.

Starting with over 200 functional requirements (HPQA-65, FSL-65, EMS-46, OCRH-31) and almost 500 entities (HPQA-110, FSL-111, EMS Certify- 102, EMS License-88 and OCRH-60), the consolidation process resulted in 68 functional requirements and 259 entities for HSQA.

Excluded Functionality

Although periodically expressed during workshops, the following functional requirements do not having a direct correlation with the scope of this initiative and/or have existing application alternatives:

- Grant Management
- Contract Management
- Legislation Tracking
- Recruiting

Several of these functional areas have also been excluded form the scope of the prior, associated projects; specifically, the business area analysis project for FSL.

Several other functional areas, although not a part of the licensing and disciplinary processes themselves, are so closely aligned they have been included in these statements of requirements:

- Workflow
- Time Reporting
- Contact / List Management
- Training Management

HSQA Functional Requirements

Number	Requirement	Classification	Priority
1	Ability to calculate and manage a complex fee structure , including cost ranges, flat fees and per unit charges supporting a variety of programs.	Authorization	Mandatory
2	Ability to determine expiration time frames and manage an authorization renewal process including party notification, renewal processing, fee determination, fee payment processing and to recognize late or non-respondent conditions.	Authorization	Mandatory
3	Ability to schedule, assign resources, set dates and track the results of inspections/surveys to include proposed corrections, sanctions and final results for facilities, training programs, businesses and parties.	Authorization	Mandatory
4	Ability to issue professional authorizations (to include temporary versions).	Authorization	Mandatory
5	Ability to establish eligibility requirements (training, examinations, continuing educations, etc.) for various professions, health care programs types (volunteer, scholarship, Hope intern, loan repayment, etc.) and facility types (hospital, laboratory, pharmacy, private office, rural health clinic, federally qualified health center, critical access hospital, etc.) and to systematically audit and/or track applications and performance against those eligibility requirements.	Authorization	Highly Desirable
6	Ability to record and track endorsements / exemptions associated with a authorization.	Authorization	Mandatory
7	Ability to track and process authorization applications including verifying eligibility, fees calculations, fee payments and applicant notification (date and message).	Authorization	Mandatory
8	Ability to label the type of authorized party (physician, pharmacist, physical therapist, SEI, EMT, paramedic, etc.).	Authorization	Mandatory
9	The ability to support the recording of the following attributes for an authorization : active, inactive, on-hold, etc.	Authorization	Mandatory

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10	The ability to support the recording of the following attributes for a party : retired, teaching, research, J1 visa, specialty, in loan repayment, participant in a scholarship program, authorized, un-authorized, not operating, authorization not needed, etc.	Authorization	Mandatory
11	The ability to support the recording of the following normal attributes for a facility : owner, address, etc. and the unique attributes for a facility: number of beds, seasonal closure dates, crop types and status, square footage, resource capacity (number, type (for example, neurosurgeons) and coverage (for example, 7x24)), EM type (basic, intermediate, advanced, aid, transport), etc.	Authorization	Mandatory
12	Ability to identify those professions that have dependent relationships and ascertain that the supervisor's authorization is current before issuing the subordinates.	Authorization	Mandatory
13	Ability to systematically handle payments problems related to bad checks (the problem of issuing an authorization and at a later date discovering that the health care provider's payment was not good) and overpayments (refund required).	Authorization	Mandatory
14	Ability to track information about all contact events with a authorized party such as who made the contact, how contact was made (phone, fax, letter, etc.) and when.	Authorization	Desirable
15	The ability to integrate an authorization and disciplinary system with a system of criminal history for the purpose of performing a background check on a party.	Authorization	Highly Desirable
16	Ability to record vehicles (license plate, VIN, equipment variances) and to associate them with a party's authorization .	Authorization	Mandatory
17	Ability to indicate a authorized party is participating in progressive evaluations and therefore an examination may not be required for authorization renewal.	Authorization	Mandatory
18	Ability to classify/categorize and prioritize complaints and cases by type (administrative, alcohol/drug, sexual, etc.), by source and by importance.	Disciplinary	Mandatory

19	Ability to track all activities (counseling events, referrals, inspections/surveys, hearings, appeals, continuances, etc.) associated with a complaint or case to include incident details (location, description and date), disciplinary actions (if any) and compliance activities which may occur for the professions or facilities authorized by HSQA.. The tracking should include the events being tracked, the scheduled dates, the assigned parties and the actual dates when the activities were completed and the result of the activity (for example; authorization endorsements/exemptions, conditions of probation, corrective actions, education requirements, treatment requirements, payment of fines, and other types of restrictions/limitations).	Disciplinary	Mandatory
20	Ability to identify all parties and their roles (Health Care Provider, facility, business, complainant, respondent, continuance requester, judge, witness, observer, etc.) involved in a complaint or case.	Disciplinary	Mandatory
21	Ability to link violations and disciplinary actions to regulations .	Disciplinary	Mandatory
22	Ability to establish payment schedules and to record the party who made the payment of fines and costs associated with a disciplinary action.	Disciplinary	Highly Desirable
23	Ability to associate a party or a construction project with a facility.	Other	Mandatory
24	Ability to systematically and uniquely identify all parties, authorizations, cases, complaints, dockets, etc.	Other	Highly Desirable
25	Ability to track projects (construction, certificate of need, determination of reviewability, etc.), including facility, party, project status, project type, drawings/revisions received, reviewer’s comments, findings, issuance date and decision/determination.	Other	Mandatory
26	Ability to track instances of technical assistance including who provided assistance, who received assistance, what assistance was given, when it was given and how long it took.	Other	Desirable
27	The system should provide for a master calendar where schedules of all HSQA parties can be viewed and scheduling conflicts resolved.	Other	Desirable

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28	Ability to coordinate and schedule an event (construction project conferences, hearings, etc.), to invite/notify parties and to allocate resources (rooms, equipment, etc.).	Other	Highly Desirable
29	Ability to track the location and status of construction drawings and revisions.	Other	Mandatory
30	The system needs to be able to log call center and counter service activity by type, program and time expended.	Other	Highly Desirable
31	Ability to track public disclosure requests to include the parties involved and their roles in the request.	Other	Highly Desirable
32	Ability to capture and store protocols for state and medical program directors.	Other	Highly Desirable
33	Ability to create documents by merging standard templates and the specific information associated with the authorization/disciplinary processes (for example; renewal notice, denial letter, statement of charges, request for additional information, etc.) and to address those documents to appropriate parties (for example; applicant, respondent, complainant, licensee, etc.). The process should include spell / grammar checking.	General	Mandatory
34	Ability to establish roles and associated responsibilities , by which users will be able to create, read, update and delete data.	General	Highly Desirable
35	Ability to control application access and authority via authentication and authorization.	General	Mandatory
36	Ability to define standard workflow templates which would contain defined tasks, allows for party assignments, contain standard duration schedules, and provide for the identification of deliverable and which could be augmented or modified for the variations in a particular process. Once defined, the activities against the workflows could be recorded as to completion and actual time expended as well as tracked for scheduled status.	General	Highly Desirable
37	Ability to send messages (alerts/notifications/ticklers/etc.) to party(s) for the purposes of assigning new tasks and/or to notify of pending or past due tasks.	General	Mandatory
38	System should contain appropriate edits/audits to assure data accuracy and integrity.	General	Highly Desirable
39	The system must provide a robust search capability for major information entities; to include authorization, complaint, party, case, etc.	General	Mandatory

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40	The application must be robust and easy to understand and use and have graphic user interface.	General	Mandatory
41	Ability for users to generate recurring and ad-hoc reports which could contain any data which has been captured or created by the system (this could include statistical reporting, such as applications received, inspections/surveys performed, complaints received, and renewals processed, the number of disciplinary actions per profession or geographical reporting by county as well as reports of staff assignments, upcoming events-surveys due next month, authorizations expiring; or a reconciliation report of cash actually received versus applications and renewals received, etc.).	General	Mandatory
42	The system should have a common database and a single (non-redundant) point of capture.	General	Mandatory
43	The system should have the ability to record comments/notes at each step in the authorization & disciplinary process.	General	Highly Desirable
44	Ability to track what part of the HSQA Organization a program belongs to and what professions or facility types are part of the program.	General	Highly Desirable
45	The system should provide an audit trail of all activity within the application to include date, time and log-on id associated with the activity.	General	Mandatory
46	Ability to maintain and uniquely report history for all parties and/or facilities that apply for or are granted an authorization. The history should include addresses, ownership, fees paid, applications submitted, authorizations issued, complaints made, disciplinary actions taken, examination results, etc.	General	Highly Desirable
47	Ability to easily update and add additional choices to tables .	General	Mandatory
48	Wherever possible, the system should provide for web-based self-service (for example, activities in association with making a complaint, applying for authorization, renewing a authorization, paying a fee, taking an examination, changing an address, taking training, etc.).	General	Mandatory
49	Ability to send , via e-mail and fax, user selected and software application generated documents and reports.	General	Highly Desirable

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50	Ability to routinely create automated interfaces for the import of HSQA type data (for example; from revenue system on applications and renewals or from DOL systems for shopkeepers who have endorsements/exemptions on their authorization, EMT examination results, trauma registry events, etc.) into the package application and for the export of HSQA data from the package (for example; to the federal mandated HIPDB or to the ASPEN computer applications).	General	Mandatory
51	The system must be flexible enough to allow for user-defined business rules (for example; renewal date should be based on cash date not the date the renewal was processed, several professions need a surety bond and the system needs to know which professions requires a surety bond and it needs to be noted as required, automatic renewals should not occur when there is a problem with a authorized party –complaint, authorization issued in error, etc.).	General	Mandatory
52	Ability to establish and maintain online “help” where HSQA processes can be documented, screen usage can be discussed and terms can be defined.	General	Highly Desirable
53	Wherever possible, system and/or user defaults should be used to record information versus human keying of data (for example; when a authorization is renewed, continuing education due dates should be automatically reset in relation to the new renewal date). Similarly, the system should be provide intelligent keying (for example, when selecting county, keying “k” could show all the counties in WA state, which begin with “K” and the appropriate one could be selected).	General	Mandatory
54	Ability to designate certain fields as required and to cause error message when data is not supplied.	General	Mandatory
55	The system should provide for web-publishing of user selected and computer application generated documents and reports.	General	Highly Desirable
56	The system should provide for remote access to the computer application via PC and modem (for example, inspector/surveyors in the field).	General	Mandatory
57	Ability to selectively control reporting sequence (for example; by selecting a column identifier).	General	Mandatory

58	Ability to record and classify different types of current and prior versions of party information to include: telephone numbers (examples include: home phone, cell phone, and business phone), names (alias, maiden, preferred, etc.) and addresses for a party (postal, delivery, shipping, home, e-mail, etc.).	General	Highly Desirable
59	Ability to establish and maintain distribution lists for parties.	General	Mandatory
60	Ability to record actual time against tasks (for example, technical assistance, inspections/surveys, legal services, adjunctive services, etc.) and report that time for charge-out.	General	Highly Desirable
61	Ability to report the elapse time of activities within processes in order to be able to calculate average elapsed time from point to point or beginning to end.	General	Highly Desirable
62	Ability to systematically design a user interfaces (poll, form, etc.) which can be completed interactively or printed for manual completion and subsequent data entry.	General	Highly Desirable
63	Ability to capture and store digital images (for example; photos, scanned images, etc.) and to insert them into reports.	General	Mandatory
64	The system must be able to associate applications, complaints, cases, disciplinary cases, etc. activity to the physical archive of the associated documents (bar-coded box/folder/system identifier).	General	Highly Desirable
65	Ability to locate and map addresses by geographic location / area designations (for example; Health Service area, Rural Health Area and other designates-rural, under-supported, etc.).	General	Highly Desirable
66	Ability to open multiple computer application screens, pages, windows, etc. simultaneously.	General	Highly Desirable
67	Ability to identify all programs that a geographical area is eligible for and a participant in.	General	Highly Desirable
68	Ability to record the amount of time a professional works in a given period and to record the type of service and type of party to whom the service was provided.	General	Highly Desirable

Project Management

The project management deliverables included:

- Project Plan
- Project Status Reporting
- Lessons Learned

Project Plan

Task		April	May	June
Generalize Terms and Entities	Plan			
	Actual			
Common ERD	Plan			
	Actual			
Common Requirements	Plan			
	Actual			
Prioritization	Plan			
	Actual			
	Plan			
	Actual			
	Forecast			
	Revision			

The project plan for tasks 5 and 6 was prepared and delivered in April 2004 and has remained relatively unchanged through-out the course of the project.

Project Status Reports

Project status reports were presented to the steering committee on April 22, 2004 and June 17, 2004. A written status report was also provided as of May 31, 2004

Lesson Learned

During the course of the project, several valuable lessons were learned:

1. Process modeling is an effective method for discovering functional requirements.
2. Data modeling is an effective method for discovering data requirements.
3. E-mail is an effective tool for confirming and prioritizing business requirements for the HPQA, EMS and OCRH levels.
4. Initial meetings at the HSQA Steering Committee and at the HPQA, EMS and OCRH management levels seemed to jump-start the requirements gathering.
5. The participation of Pat Collins in all the HPQA workshops and Neil Edgin and Sandra Dlugosz in all the EMS workshops added credibility and continuity to the sessions.

Attachment A - Conceptual Data Model for HSQA

Attachment B - Entity Definitions for HSQA

Attachment C - Data Model Business Rules for Major Entities